



MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
 BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Johns Manville Corporation
 717 17th Street
 Denver, CO 80202

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: JM PVC Single Ply Roof Systems over Recover Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews and revises NOA No. 08-0729.03 and consists of pages 1 through 8.
 The submitted documentation was reviewed by Jorge L. Acebo.



NOA No.: 12-0410.05
 Expiration Date: 12/06/17
 Approval Date: 11/29/12
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ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Single Ply
Material: PVC
Deck Type: Recover
Maximum Design Pressure: See specific assemblies.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:
TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
JM PVC	50 mil x 39" or 78" x 100' 60 mil x 39" or 78" x 100' 80 mil x 39" or 78" x 75'	ASTM D4434	PVC polyester reinforced membrane.
JM Urethane Insulation Adhesive	N/A	Proprietary	Urethane insulation adhesive.
JM Two Part Urethane Insulation Adhesive	N/A	Proprietary	A two-part urethane insulation adhesive.
MBR Bonding Adhesive	N/A	Proprietary	A two-part insulation and membrane adhesive.
JM PVC Membrane Adhesive (Low VOC)	N/A	Proprietary	Low solvent based adhesive.
JM PVC Membrane Adhesive (Solvent Based)	N/A	Proprietary	Solvent based adhesive.
JM PVC Profile	1-1/2" wide x 1-1/4" high x 10' long	Proprietary	Non-reinforced, extruded PVC for simulating the aesthetics of standing seam metal roofing.
JM PVC Spine	3/4" wide x 13/16" high x 7' long	Proprietary	Non-reinforced, extruded PVC for simulating the aesthetics of standing seam metal roofing.
JM PVC Penetration Pan	Various	ASTM D4434	Molded PVC for flashing penetration.
JM DN Flameguard Slipsheet	Various	Proprietary	Laminated foil/kraft paper slip sheet with a fiber glass reinforcement.
JM Polyester Mat 9-oz Slipsheet	Various	Proprietary	Needle-punched polyester fabric slip sheet.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
JM PVC Pipe Boots	Various	ASTM D4434	Non-reinforced molded PVC flashing penetrations.
JM PVC Universal Corner	Various	ASTM D4434	Non-reinforced molded PVC for inside and outside corner flashing.
JM PVC T-Joint Patch	Various	ASTM D4434	Non-reinforced PVC used to cover T-joints and fasteners.
JM PVC Detail Membrane	Various	ASTM D4434	Non-reinforced PVC used for pipe and corner flashing.
JM PVC Detail Strip	Various	ASTM D4434	PVC used to waterproof joints.
JM PVC Coated Metal	Various	ASTM D4434	JM PVC laminated onto galvanized steel for metal flashings and edge details.
JM PVC Walkpad	Various	ASTM D4434	Textured PVC walk pad.
JM PVC Heavy-Duty Walkpad	Various	ASTM D4434	Textured PVC walk pad.
JM PVC Safety Line	Various	ASTM D4434	Yellow PVC membrane use to identify the perimeter of the roof .

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ENRGY 3, ENRGY 3 25 PSI, JM ISO-3	Isocyanurate Insulation	Johns Manville
Invinsa Roof Board	High-density polyisocyanurate with fiber glass reinforced facers	Johns Manville
ISO 95+ GL	Polyisocyanurate foam insulation	Firestone
ACFoam II, ACFoam III	Isocyanurate Insulation	Atlas Roofing Corp.
Multi-Max FA	Polyisocyanurate foam insulation	Rmax, Inc.
Dens-Deck	Silicon treated gypsum	G-P Products



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	High Load Fasteners	Insulation and membrane fastener	Various	Johns Manville
2.	High Load Plates	Galvanized steel plates for use with High Load Fasteners	2-3/8" diameter	Johns Manville
3.	OMG Super XHD Fastener	Truss head, self-drilling, pinch point, high thread fastener	#21 x 16" max. length	OMG
4.	OMG 2-3/4" Super XHD Barbed Plate	Round galvanized steel stress plates for use with OMG fasteners.	2-3/4" round	OMG

EVIDENCE SUBMITTED:

<u>Test Agency Name</u>	<u>Identifier</u>	<u>Report</u>	<u>Date</u>
FM Approvals	3025881	FM 4450	08/09/06
	3016629	FM 4470	12/12/03
	3018807	FM 4470	06/25/04
	3014692	FM 4470	08/05/03
	3015444	FM 4450	07/11/03
	3012321	FM 4470	07/29/02
	3014751	FM 4450	08/27/03
	3009502	FM 4470	12/21/00
	3008869	FM 4470	03/19/01
	3025245	FM 4470	03/24/08
	3025170	FM 4470	
	3031670		
Momentum Technologies, Inc.	NX21J0A	ASTM D 4434	06/01/11
	NX21J0B	ASTM D 4434	07/20/11
	NX21J0C	ASTM D 4434	06/01/11



APPROVED ASSEMBLIES

- Membrane Type:** Single Ply, PVC
- Deck Type 7I:** Recover, Insulated
- Deck Description:** Concrete
- System Type A(1):** One or more layers of insulation adhered with approved adhesive to existing BUR; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Invinsa Roof Board Minimum ¼" thick	N/A	N/A

Note: Invinsa Roof Board shall fully adhered to the existing BUR with MBR Bonding Adhesive at a rate of 1.5 gal/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC Membrane fully adhered to the Invinsa Roof Board with TACC LA 432 at a rate of 1.0 gal./sq. on both membrane and substrate, JM PVC Membrane Adhesive (Low VOC) at a rate of 0.83 gal./sq. on both membrane and substrate, TACC FA 636 at a rate of 0.67 gal./sq., or JM PVC Membrane Adhesive (Solvent Based) at a rate of 0.83 gal./sq. on both membrane and substrate and heat-welded 1.5" side laps.

Maximum Design Pressure: -112.5 psf; (See General Limitation #9.)



Membrane Type: Single Ply, PVC
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type A(2): One or more layers of insulation adhered with approved adhesive to existing BUR; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II, ACFoam III, ENRGY 3, JM ISO 3, ENRGY 3 25 PSI, ISO 95+ GL, Multi Max FA Minimum 1.5" thick	N/A	N/A

Note: All insulation shall be adhered to the existing deck with JM Two-Part Urethane Insulation Adhesive in ¾" ribbons spaced 12" o.c. (with all insulations except ACFoam III, PSI 25, Hy-Therm AP and Multi Max FA), JM Urethane Insulation Adhesive in ½" ribbons spaced 12" o.c. (with all insulations except ACFoam III), or Tite-Set Insulation Adhesive in 3-3½" ribbons spaced 12" o.c. (with all insulations except PSI 25 and Hy-Therm AP). Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Invinsa Roof Board Minimum ¼" thick	N/A	N/A

Note: Invinsa Roof Board shall be adhered to the insulation with JM Urethane Insulation Adhesive in ½" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC Membrane fully adhered to the Invinsa Roof Board with TACC LA 432 at a rate of 1.0 gal./sq. on both membrane and substrate, JM PVC Membrane Adhesive (Low VOC) at a rate of 0.83 gal./sq. on both membrane and substrate, TACC FA 636 at a rate of 0.67 gal./sq., or JM PVC Membrane Adhesive (Solvent Based) at a rate of 0.83 gal./sq. on both membrane and substrate and heat-welded 1.5" side laps.

Maximum Design Pressure: -112.5 psf; (See General Limitation #9.)



Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Concrete, Steel, Wood

System Type D: Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following to a maximum thickness of 1”:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Dens Deck		
Minimum ½” thick	N/A	N/A

Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. At an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Membrane: JM PVC Membrane attached through the preliminary attached insulation as specified below.

Fastening #1: Minimum 40 mil Membrane is mechanically attached using High Load Fasteners and High Load Plates spaced 6” o.c. within 5.5” wide laps, spaced 114” o.c. and sealed with minimum 2” wide heat welds.
(Maximum Design Pressure -45 psf; See General Limitation #7)

Fastening #2: Minimum 40 mil Membrane is mechanically attached using OMG Super XHD Fasteners and OMG Super XHD 2-¾ Barbed Plates spaced 6” o.c. within 5.5” wide laps, spaced 114” o.c. and sealed with minimum 2” wide heat welds.
(Maximum Design Pressure -60 psf; See General Limitation #7)

Maximum Design Pressure: See fastening above.



RECOVER SYSTEM LIMITATIONS:

1. Existing roof surfaces used as a bonding substrate shall be tested for uplift resistance, in compliance with Miami-Dade County Protocol TAS 124 to the calculated design pressures of the field, perimeter and corner areas, determined in compliance with Chapter 23 of the South Florida Building Code.
2. If mechanical attachment to the structural deck through the existing roof system is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117 and/or RAS 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.
3. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117 and/or RAS 137. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9N-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE



NOA No.: 12-0410.05
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